

REMARKS/ARGUMENTS

Minor changes are made to this specification. To make the invention more clear, reference numeral (105) showing a longitudinal axis of the blade is added to Figure 1a and reference numeral (106) showing the zigzagged or Z-shaped cross section is added to Figure 1b. Both reference numerals, 105 and 106, are also added to the discription of the blade on page 5 of the specification as shown above. No new matter is introduced.

Claim 3 is canceled without prejudice. Claims 11-20 are withdrawn. Claims 1, 7, 21, and 27 are amended. New claim 31 is added. New claim 31 incorporates limitations of the original claims 1 and 2 and, thus, do not introduce new matter. Claims 1, 2, 4-10, and 21-31 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

Election/Restrictions

The Examiner has required restriction between an apparatus for piercing container cups without a latch assembly, claims 1-10 and 21-30 (Group I) and an apparatus for piercing container cups with a latch assembly, claims 11-20 (Group II). During a telephone conversation with the Examiner on 2/24/2003, a provisional election was made with traverse to prosecute the invention of Group I. In the outstanding Office Action, the Examiner requested a confirmation of this election. In response, applicants hereby affirm the provisional election of Group I, corresponding to claims 1-10 and 21-30, with traverse.

Rejection to the Drawings:

The drawings are objected under 37 C.F.R. §1.83(a) because they allegedly do not show claimed z-shaped cross-section of the blade. The Examiner, appears to believe that the cross-section of the blade shown in Figures 1a and 1b has a zigzagged shape. Although applicants believe that the cross-section 106 shown in Figure 1b has a z-shape if observed by placing the drawings page 1 in the landscape

orientation, in order to expedite the prosecution of the instant application, applicants amended claims 1 and 21 by changing the term “z-shaped” to the term “zigzagged.” This amendment to claims 1 and 21 overcomes the Examiner’s objection to the drawings.

Claim Rejection Under 35 U.S.C. § 112:

Claims 4 and 24 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to make and use the invention. More specifically, the Examiner appears to believe that because “the alignment block assembly never comes into contact with the container,” “it is unclear how the alignment block assembly restrains the container when the piercing blade is being withdrawn after piercing a cap.” This rejection is respectfully traversed.

As explained on pages 6-7 of the specification (page 6, line 10 – page 7, line 11) with reference to Figures 2-5, the *alignment block 3 is held in contact with the carriage assembly 2* by means of a light tension spring 4. The carriage assembly 2 moves downward until the *alignment arm 6 encounters the sample tube cap 9*. At this point, the carriage assembly 2 separates from the top 8 of the alignment block 3, the latch trigger 18 is released, and the teeth 22 on the gear rack actuator latch with the gear rack segment teeth 23. *This locks the alignment block 3* in position. The cutting blade 4 is driven down through the wash tower/wick holder 5 and cuts through the tube cap 9. At the very bottom of the cutting stroke, the leadscrew drive motor 17 is reversed and the blade assembly 4 is withdrawn from the tube and tube cap. *Since the alignment block is still “latched”, the tube is not lifted* by the friction between the blade 4 and the cut tube cap 9. The latch remains engaged until the upward travel of the carriage and the blade causes the carriage top to contact the latch trigger and release the gear rack teeth.

Thus, the specification and Figures 2-5 explain how the alignment block assembly restrains the container when the piercing blade is being withdrawn from the container. Therefore, one skilled in the art would be able to practice any of the instantly claimed embodiments without undue experimentation in light of the teachings of the instant specification. Consequently, applicants submit that claims 4 and 24 are enabled by the specification in their full scope and that the rejection under 35 U.S.C. § 112, first paragraph, should be withdrawn.

Claims 1-10 and 21-30 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for reciting a z-shaped cross-section. The Examiner appears to believe that the cross-section shown in Figures 1a and 1b should be termed "zigzagged." Although as stated above, applicants believe that the cross-section 106 shown in Figure 1b has a z-shape, in order to expedite the prosecution of the instant application, applicants amended claims 1 and 21 by changing the term "z-shaped" to the term "zigzagged." This amendment to claims 1 and 21 overcomes the Examiner's rejection of claims 1-10 and 21-30 under 35 U.S.C. § 112, second paragraph.

Claims 4 and 24 are rejected as being indefinite because it is allegedly unclear how the alignment block assembly restrains the container when the piercing blade is being withdrawn after piercing a cap. This rejection is respectfully traversed.

As explained above, the specification and Figures 2-5 teach restraining the container by using the alignment block. Thus, claims 4 and 24 are definite in view of the specification and Figures 2-5 and the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claims 6, 7, 26, and 27 are rejected as being indefinite for the use of the term "trigger." The Examiner appears to believe that the term "trigger," as used in

claims 6, 7, 26, and 27, means “a block that moves up and down,” “while the accepted meaning is ‘a piece (as a lever) connected with a catch or detent as a means of releasing it.’” The Examiner further notes that “a term in a claim may not be given a meaning repugnant to the usual meaning of that term.” This rejection is respectfully traversed.

The use of term “trigger” in claims 6, 7, 26, and 27 is clear in view of its English language meaning and in further view of the instant specification. The Webster's II New Riverside Dictionary of the English Language, 1996 gives the following definition to the word “trigger” on page 720: “a ... device that ***releases or activates*** a mechanism” (see attached page 720).

The meaning of the term “trigger” given by the instant specification is consistent with its plain English language definition. The specification explains on page 6, lines 18-22, that ***when the latch trigger 18 is forced up*** into the latch assembly 12, ***drives the actuator slide assembly 19*** toward the front of the piercer, which ***disengages the teeth 22*** in the gear rack actuator 24 from the gear rack segment teeth 23 of gear rack segment 13. Further, the specification states on page 6, lines 29-34, that ***when the latch trigger 18 is released***, the ***teeth 22 on the gear rack actuator interlock*** with the gear rack segment teeth 23, which locks the alignment block 3 in position.

Thus, the term “trigger” recited in claims 6, 7, 26, and 27 and read in light of the specification means a device that ***releases or activates the latch mechanism***. Contrary to the Examiner's assertions, this meaning is not repugnant to the usual meaning of the term. Thus, claims 6, 7, 26, and 27 are definite and the rejection under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claims 7 and 27 are rejected as being unclear to whether the latch assembly, actuator, or trigger has locking means. In response, applicants amended claims 7 and 27 to clarify that the actuator has locking means. This amendment overcomes the rejection under 35 U.S.C. § 112, second paragraph.

Claim Rejection Under 35 U.S.C. § 102:

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by JP 11-285589 to Ishibashi. Ishibashi teaches a safety razor blade that *prevents skin from being injured* (see the attached translation of the Ishibashi's abstract) and, thus, is incapable of piercing any surfaces. Although applicants believe that the structural limitation of "piercing blade" is not met by Ishibashi's safety razor, in order to expedite the prosecution of the present invention, the applicants amended claim 1 by adding limitations of claim 3, which was not rejected over Ishibashi. Indeed, Ishibashi does not teach or suggest an apparatus for piercing comprising a piercing blade, a carriage assembly for moving the blade, and means for driving the carriage assembly. Therefore, amended claim 1 is patentable over Ishibashi.

Claims 1-10 and 21-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by WO 96/15062 to Ferrari. This rejection is moot with respect to claim 3 due to the cancellation of this claim. With respect to claims 1, 2, 4-10 and 21-30, the rejection is traversed.

Independent claims 1 and 21 have been amended to clarify that a piercing blade of the present invention has a zigzagged cross-section that is *perpendicular to its longitudinal axis* (105). As explained on pages 8, line 22 – page 9, line 6, the zigzagged cross-section of the blade of the present invention provides a number of unexpected advantages over the conventional piercing blades. The blade of the present invention is stiff and can reliably pierce a thick (i.e., typically 3/8" or thicker) rubber cap or stopper in the top of a sample tube made of either glass or plastic without leaving debris or breaking the tube. Also, it reduces the amount of vertical force required to pierce a thick cap or stopper, which prevents jamming the cap or stopper into the sample container, and also reduces the retraction force required to strip the cap or stopper from the piercing blades. The Z-shaped cut made by the blades of the present invention is more consistent and allows adequate

ventilation during sample probe entry, so that obstruction detection and sample aspiration meet the system requirements.

Ferrari does not teach a piercing blade having a Z-shaped cross-section that is perpendicular to the blade's longitudinal axis. Instead, Ferrari describes a corkscrew with a conventional, spiral-like shaped thread 13. A cross-section of thread 13 taken perpendicularly to its longitudinal axis doesn't have a zigzagged shape as required by claims 1 and 21, but rather is circular in shape.

Ferrari does not suggest the piercing blade of the present invention. Ferrari is not concerned with piercing stoppers to provide a consistent cut that allows an easy insertion of a probe through the stopper. Instead, Ferrari is concerned with an extraction of a stopper from a bottle with a corkscrew. Nothing in Ferrari suggests a piercing blade, which has a zigzagged cross-section that is perpendicular to its longitudinal axis. Therefore, claims 1 and 21 are neither anticipated nor rendered obvious by Ferrari. Claims 2, 4-10 and 22-30 depend, directly or indirectly, from patentable claims 1 and 21 and are, therefore, believed to be patentable over Ferrari for at least the same reasons as claims 1 and 21.

Claim Rejection Under 35 U.S.C. § 103:

Claims 1-9 and 21-29 are rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 0 884 575 to McCandless *et al.* in view of DE 523569 to Lafarge. This rejection is moot with respect to claim 3 due to the cancellation of this claim. With respect to claims 1, 2, 4-10 and 21-29, the rejection is traversed.

The Examiner has acknowledged that McCandless does not teach piercing blade with a z-shaped cross-section but relied on Lafarge for teaching the same. As explained above, independent claims 1 and 21 have been amended to clarify that a piercing blade of the present invention has a zigzagged cross-section that is *perpendicular to its longitudinal axis* (105). However, similarly to Ferrari, Lafarge describes a spirally shaped corkscrew, which does not have a zigzagged cross-section that is perpendicular to its longitudinal axis. Instead, corkscrew of has

a rectangular cross-section that is perpendicular to its longitudinal axis. Therefore claims 1 and 21 are neither anticipated nor rendered obvious by McCandless and Lafarge, either alone or in combination. Claims 2, 4-10 and 22-29, depend, directly or indirectly, from patentable claims 1 and 21 and are, therefore, believed to be patentable over McCandless and Lafarge for at least the same reasons as claims 1 and 21.

Claims 1, 3-10, 21 and 23-30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,213,764 to Kerr et al. in view of DE 523569 to Lafarge. This rejection is moot with respect to claim 3 due to the cancellation of this claim. With respect to claims 1, 4-10, 21, and 23-30, the rejection is traversed.

The Examiner has acknowledged that Kerr does not teach piercing blade with a z-shaped cross-section but relied on Lafarge for teaching the same. As discussed above, Lafarge describes a spirally shaped corkscrew, which does not have a zigzagged cross-section that is perpendicular to its longitudinal axis. Therefore claims 1 and 21 are neither anticipated nor rendered obvious by Kerr and Lafarge, either alone or in combination. Claims 4-10 and 23-30, depend, directly or indirectly, from patentable claims 1 and 21 and are, therefore, believed to be patentable over Kerr and Lafarge for at least the same reasons as claims 1 and 21.

Claims 1-10 and 21-30 are provisionally rejected under 35 U.S.C. § 103(a) as being obvious over co-pending Application No. 09/599305 which has common inventors and assignee with the instant application in view of DE 523569 to Lafarge. This rejection is moot with respect to claim 3 due to the cancellation of this claim. With respect to claims 1, 2, 4-10, and 21-30, the rejection is traversed.

The Examiner has relied on Lafarge for teaching of a blade with a z-shaped cross-section. However, as explained above Lafarge describes a spirally shaped corkscrew, which does not have a zigzagged cross-section that is perpendicular to its longitudinal axis. Therefore claims 1 and 21 are neither anticipated nor rendered

obvious by the co-pending Application No. 09/599305 and Lafarge. Claims 2, 4-10, and 22-30, depend, directly or indirectly, from patentable claims 1 and 21 and are, therefore, believed to be patentable over the co-pending Application No. 09/599305 and Lafarge for at least the same reasons as claims 1 and 21.

Double Patenting:

Claims 1-10 and 21-30 are rejected as being directed to an invention, which is not patentably distinct from claims 1-53 of the co-pending Application No. 09/599305. The Examiner made this rejection in reliance on alleged disclosure of a blade with a z-shaped cross-section by Lafarge. This rejection is respectfully traversed.

As discussed above, Lafarge describes a spirally shaped corkscrew, which does not have a zigzagged cross-section that is perpendicular to its longitudinal axis. The co-pending Application No. 09/599305 is directed to a piercing device having a modified H-shaped cross-section. Thus, claims 1, 2, 4-10, and 21-30 of the present invention are directed to an invention that is patentably distinct from the co-pending Application No. 09/599305. Accordingly, applicants request a withdrawal of the double patenting rejection.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

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By: 

Wei-Ning Yang
Registration No. 38,690
Attorney for Applicant(s)

500 South Grand Avenue, Suite 1900
Los Angeles, California 90071
Phone: 213-337-6700
Fax: 213-337-6700